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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,029	12/18/2001	Charles T. Rettner	ARC920010114US1	8707
30355	7590	04/21/2004	EXAMINER	
DANIEL E. JOHNSON IBM CORPORATION, ALMADEN RESEARCH CENTER INTELLECTUAL PROPERTY LAW DEPT. C4TA/J2B 650 HARRY ROAD SAN JOSE, CA 95120-6099			RODRIGUEZ, GEENDA P	
			ART UNIT	PAPER NUMBER
			2651	

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,029

Applicant(s)

RETTNER ET AL.

Examiner

Glenda P. Rodriguez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22, 31 and 33 is/are allowed.
- 6) ☒ Claim(s) 23-25, 28, 29 and 32 is/are rejected.
- 7) ☒ Claim(s) 2-4, 19-21, 26, 27 and 30 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 23, 24, 25, 28, 29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell (US Patent No. 5, 199, 090) in view of Takagi et al. (US Patent No. 6, 351, 447).

Regarding Claims 23, 29 and 32, Bell teaches a method of directing electromagnetic radiation onto a data recording medium, comprising:

Providing a metal structure having an array of features (Pat. 5, 199, 090;

See Fig. 4, which Bell teaches a metallic structure);

Directing optical radiation onto the array of features to generate at least one surface plasmon mode, thereby enhancing the optical output emanating from an emission region in the metal structure (Pat. No. 5, 199, 090; Col. 8, Line 65 to Col. 9, Line 8 and Col. 16, Line 2 to Col. 17, Line 23);

Bell fails to teach wherein directing the optical output from the emission region is read back by a processor. However, this feature is known in the art as disclosed by Takagi et al., wherein it teach the read back signal of the output being processed by a host

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processor (Pat. No. 6, 351, 447; Col. 6, Lines 52-62). It would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify Bell's invention in order to determine the target sectors for reading and/or writing.

Regarding Claim 24, Bell teaches all the limitations of Claim 23. Bell further teaches wherein applying a magnetic field to the recording medium to write data into the recording medium (Pat. No. 5, 199, 090; Col. 4, Lines 38-65).

Regarding Claim 25, Bell teaches the limitations of Claim 24. Bell further teaches heating the recording medium with the optical output (Pat. No. 5, 199, 090; Col. 3, Lines 9-37).

Regarding Claim 28, Bell teaches the limitations of Claim 23. Bell further teaches wherein the recording medium selected from the group consisting of magneto-optic (Pat. No. 5, 199, 090; Col. 3, Lines 9-37).

Allowable Subject Matter

Claims 1-22, 31 and 33 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding Claims 1 and 33, the primary reason for allowance is the inclusion of the limitation wherein the near-field portion that extends from the emission region out to a distance less than the average wavelength of the emitted optical output.

Regarding Claim 33, the primary reason for allowance is the inclusion of the limitation wherein the recording medium has a grain size on the order of 10 to 500 cubic nanometers.

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Claims 26, 27 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenda P. Rodriguez whose telephone number is (703) 305-8411. The examiner can normally be reached on Monday thru Thursday: 7:00-5:00; alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (703) 308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


gpr
April 13, 2004.


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600